



*Fondation pour la Protection de la Biodiversité Marine*

FoProBiM

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REPORT TITLE

**Rapid Survey of Haitian Fishing Villages  
Exploiting Resources at Navassa Island**

TARGET AREA

**Southwestern Tip of Haiti**

FOR

**The United States Department of Commerce  
National Marine Fisheries Service  
Southeast Fisheries Science Center**

EXECUTION PERIOD

**12 months**

PROJECT REPORT

**FINAL**

August, 2009

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## **TERMS OF REFERENCE**

### **Target area**

FoProBiM will target coastal communities along the Southwestern tip of Haiti located between *Les Cayes* to the south and *Jérémie* to the north, and specifically those with fishers frequenting Navassa Island.

### **Tasks**

- as accurately as possible, determine the numbers of fishers from each community along the coast of the target area frequenting Navassa Island;
- begin research on why fishers use certain types of gear (economics, habit, history, sustainability) and their locations in the target area (correlation between gear types and location);
- provide a participant for the 2008 research cruise to Navassa Island to undertake interviews of fishers at the island and continue data collection on: numbers of fishers encountered, their home villages, fishing methods; and with the shipboard research team assist in the design of a method for collecting data from the fishers on their total catch at Navassa (before they leave the island for Haiti).

### **Detailed work plan and timetable**

#### **Work Plan**

##### **Project Components:**

Research design and methodology  
Review of existing material (fieldwork)  
Quantitative fishery data analyses (fieldwork)  
Qualitative analyses (fieldwork)  
Report writing and production

#### **Timetable**

<b><u>Month ➤</u></b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>10</b>	<b>11</b>	<b>12</b>
<b><u>Activity ▼</u></b>												
Research Design and Methodology												
Review of Existing Material												
Quantitative Fisher Data Analyses (Fieldwork)												
Qualitative Analysis of gear types (Fieldwork)												
Data Analysis												
Navassa Cruise (Fieldwork)												
Mid-term report												
Preparation of final report												

## **Deliverables**

Mid-term and final reports in English.

## **BACKGROUND**

Navassa Island is a small, uninhabited, oceanic island approximately 35 miles west of *Cap des Irois* off the Southwest tip of Haiti. Although Haiti, since its founding in 1804, has laid claim to the island, the United States has claimed it under the Guano Act of 1856 and has since placed it under the jurisdiction of the United States Department of the Interior, Fish and Wildlife Service as part of the Caribbean Islands National Wildlife Refuge Complex in joint management with NOAA.

A vast array of fish, marine turtles, marine mammals and extensive coral reef ecosystems are all present in the area around the island. Haitian artisanal fishers from the nearby Southwestern tip of Haiti are continuous visitors to Navassa Island. It is estimated that 300 to 400 Haitian fishers frequent Navassa Island when not fishing close to the mainland of Haiti; although during the course of this report this number appears to have diminished slightly over the past couple of years. They have been exploiting resources at Navassa for generations and consider the marine resources at Navassa to be an extremely important source of income. The exploitation of resources at Navassa by Haitian fishers poses interesting and challenging management issues.

Both the Department of Commerce (NOAA) as well as the Department of Interior (FWS) have recently initiated research activities at Navassa in order to better develop appropriate management plans to protect its resources. One important output from the current research initiatives is the clear fact that the sustainable management of resources at Navassa Island will require the education and cooperation of the Haitian fishers exploiting those resources.

## **TARGET AREA MAP**



## **PROJET ACTIVITIES**

The passage of hurricanes Fay, Gustave, Hanna, and Ike in quick succession starting at the beginning of August left most of Haiti more battered and bruised than ever causing delays in the initiation as well as the continuation of project activities. Already having to deal with some of the worst “roads” in the hemisphere under everyday conditions, the hurricanes left the country cut up into different inaccessible parts by washing out roads and bridges and causing landslides. Although things have somewhat dried up, many parts of the country remain inaccessible, with not much hope that things will change in the near future. Although all this created delays in the execution of activities, with a serious increase in team effort, we were able to catch up and eventually finish activities on schedule.

➤ **Research Design and Methodology**

Activities needed to accomplish this research include both primary and secondary source data gathering strategies. FoProBiM will work in close collaboration with the NMFS Navassa research team to develop protocols for the collection of fisheries related data from the fishers at Navassa Island (NOAA/NMFS will supply the needed research equipment – e.g. coolers, ice, gps(s), - as well as the catch data analysis – FoProBiM will facilitate the request of assistance for the data gathering from the fishers). The primary data gathering methods include formal and informal individual interviews, group interviews, and mapping. Secondary data gathering will focus on the collection of data related to catch and catch per unit effort (CPUE) of the fishers themselves at Navassa Island as well as a determination of which fishing communities are predominately using which type of gear.

Which coastal communities in the target area have a population of fishers frequenting Navassa will be determined. Introductory meetings with fishers both at Navassa as well as the fishing communities in Haiti will be held in order to discuss:

- the overall aim and approach of the research;
- the data collection process (individual and group interviews, and tape recordings); and,
- their recommendations of key informants (based upon extent and wealth of knowledge, familiarity with different geographic areas or fishing techniques).

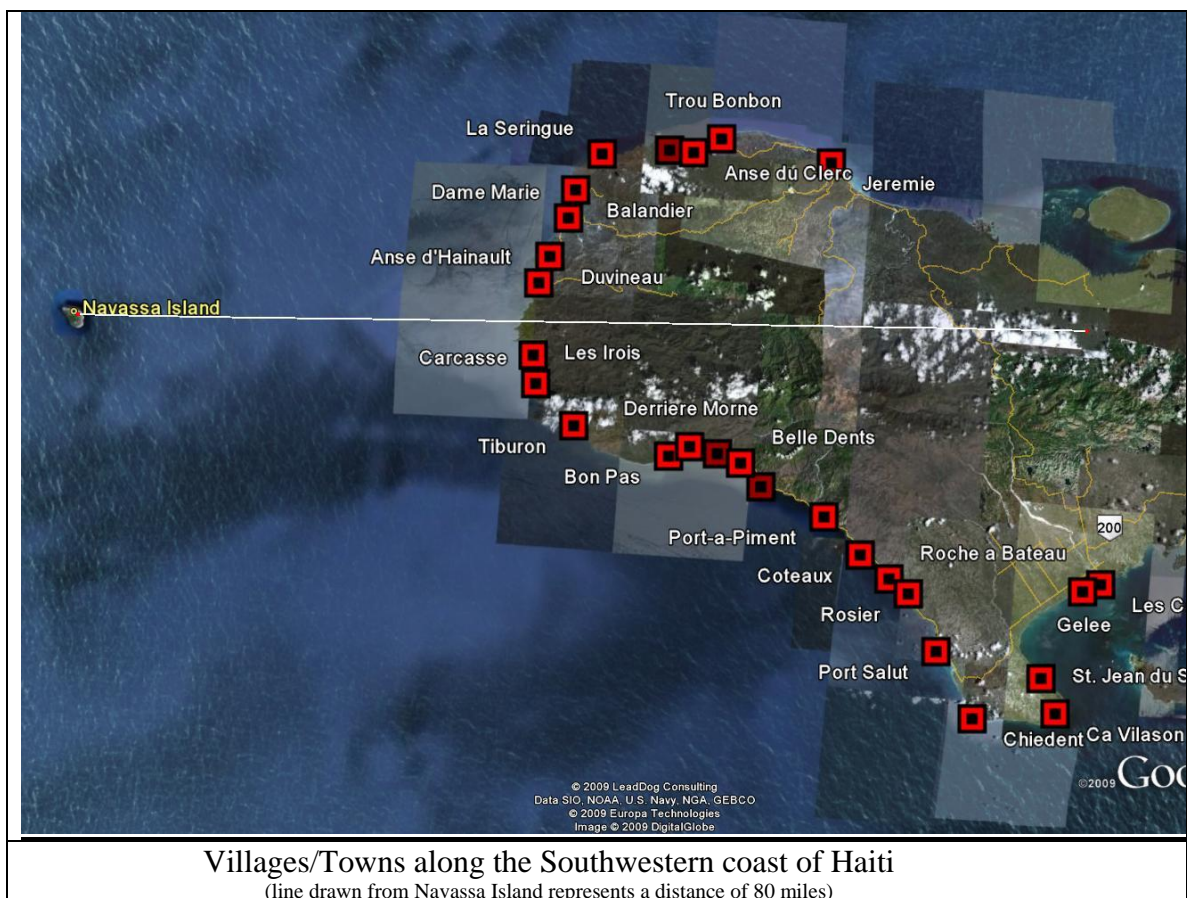
Semi-directive interviews will be conducted with the identified individuals and groups which will begin as exploratory but then delve into more substantive matters increasingly focused on:

- a quantitative analysis of fishers frequenting Navassa from different fishing villages;
- a quantitative analysis of data on fishing gear types and use in targeted villages;
- a qualitative analysis to include traditional and local fishing knowledge related to the reason(s) certain types of gear are used by the fishers (economics, habit, history, sustainability) to include data on their locations in the target area (correlation between gear types and location);
- a brief description of the local communities and stakeholders that utilize Navassa Island's marine resources;

## SITE VISITS

Site visits and survey took place between October, 2008 and April, 2009 with the research cruise to Navassa Island taking place between April 24 and May 6, 2009.

Twenty-seven villages/towns were surveyed including (from North coast to South Coast) : *Jérémie, Trou Bonbon, Anse du Clerc, Abricot, La Seringue, Balandier, Dame Marie, Duvineau, Anse d'Hainault, Les Irois, Carcasse, Tiburon, Bon Pas, Derriere Morne, Les Anglais, Belle Dents, Chardonnière, Port-à-Piment, Côteaux, Roche-à-Bateau, Rosier, Port Salut, Chiedent, Ca Vilason, St. Jean du Sud, Gelée, and Les Cayes.*



## **INTERVIEW DATA** **SURVEY RESULTS**

<b>Village/Town</b>	<b>Est. # of fishers interviewed</b>	<b>Est. # of fishers at location</b>	<b>Did community ever fish Navassa?</b>	<b>Is community fishing Navassa now?</b>	<b>Est. # of fishers from community now fishing at Navassa</b>	<b>Gear used by community* (Primary)</b>
<i>Jérémie</i>	15	200-300	Y	N	-	T,N,L(N)
<i>Trou Bonbon</i>	3	10-20	N	N	-	T,L(L)
<i>Anse du Clerc</i>	4	10-20	N	N	-	T,L(T)
<i>Abricot</i>	4	20-30	N	N	-	T,L(T)
<i>La Seringue</i>	6	10-20	N	N	-	T,L(T)
<i>Balandier</i>	6	30-50	N	N	-	T,L(T)
<i>Dame Marie</i>	20	100-200	Y	Y	50	T,N,L(T)
<i>Duvineau</i>	2	20-30	Y	Y	10	T,N,L(T)
<i>Anse d'Hainault</i>	23	100-200	Y	Y	100	T,N,L(T)
<i>Les Irois</i>	11	50-100	Y	Y	50	T,N,L(T)
<i>Carcasse</i>	3	20-50	N	N	-	T,L(T)
<i>Tiburon</i>	4	20-50	Y	Y	50	T,N,L(T)
<i>Bon Pas</i>	5	10-20	N	N	-	T,N,L(T)
<i>Derriere Morne</i>	5	20-50	N	N	-	T,N,L(T)
<i>Les Anglais</i>	2	20-50	N	N	-	T,L(T)
<i>Belle Dents</i>	2	10-20	N	N	-	T,L(T)
<i>Chardonniere</i>	6	20-50	N	N	-	T,L(T)
<i>Port-a-Piment</i>	8	20-50	N	N	-	T,N,L(T)
<i>Coteaux</i>	7	50-100	N	N	-	T,L(T)
<i>Roche-a-Bateau</i>	2	20-50	N	N	-	T,N,L(T)
<i>Rosier</i>	2	10-20	N	N	-	T,N,L(T)
<i>Port Salut</i>	13	50-100	N	N	-	T,N,L(T)
<i>Chiedent</i>	1	10-20	N	N	-	T,L(T)
<i>Ca Vilason</i>	7	10-20	N	N	-	T,L(T)
<i>St. Jean du Sud</i>	3	10-20	N	N	-	T,N,L(T)
<i>Gelée</i>	3	20-50	N	N	-	T,N,L(N)
<i>Les Cayes</i>	22	200-400	Y	Y	50	T,N,L(N)
<b>TOTALS</b>	<b>189</b>	<b>1010-2090</b>	<b>Y = 7</b>	<b>Y = 6</b>	<b>310</b>	<b>--</b>

\*T = trap, N = net, L = line

### **COLUMN DESCRIPTIONS**

➤ **Village/Town**

Village/Town located between *Jérémie* to the north and *Les Cayes* to the south. This area is most likely to have fishers from Haiti frequenting Navassa Island.

➤ **Est. # of fishers interviewed**

An estimate of the number of fishers interviewed. As with all visitors to a location asking questions, a crowd may gather with people offering their views or comments therefore making it difficult to calculate exactly how many participants were involved. Not all of the fishers in each community were interviewed.



- Est. # of fishers at location  
Estimate of all fishers at the location; full and part-time. Extremely difficult to calculate, especially in larger communities. Some are full-time dedicated fishers others may have just gone on their first fishing trip; some fish only during certain seasons, and others will only fish if there is no other work available. Rarely do any of the fishers know, nor are they able to approximate, the number of fishers in their community (concept of numbers, especially somewhat large numbers such as hundreds or greater, is often not well grasped).
- Did community ever fish Navassa?  
Have fishers from the community ever fished at Navassa Island. In this case if the immediate answer was no from the younger fishers, we sought out older fishers in order to question them. Not all of the fishers will tell you if they go to Navassa (suspicion of why you are asking).
- Is community fishing Navassa now?  
Do fishers from the community fish at Navassa Island presently (at least over the past five years)? Not all will tell interviewers or others from their community if they go to Navassa (protection of fishing zones).
- Est. # of fishers from community now fishing at Navassa
- Gear used by community  
Not all fishers will tell you what type of gear they are using and when (protection of fishing skills).

All data is approximate.

Many of the fishers may intentionally misinform you until pressed.

Other than smaller/poorer communities having less access to more expensive gear such as nets, at this time, there does not appear to be a correlation between fishing gear type used and any other factor. Although the Haitian fishers pretty much agree that the catch/unit/effort is increased with the use of nets many claim that they will not use nets because of the amount of waste of the catch that it causes (the reality may also simply be that they cannot afford the nets).

Even with good will expressed on the part of many of the fishers with which we have had previous amicable interactions the collection of any type of specific (concrete) data proved to be a trial in frustration. During the project it was decided that even attempting to estimate the amounts of gear each fisher had (used) would be futile (concepts of time and being able to count are limiting factors). Short of establishing a “permanent” (at least month long) monitoring regime within a community involving a trained data gatherer with the support of a

least one well-respected local fisher the ability to gather important data with any degree of reliability is severely limited.

The fisheries data collected during the research cruise is being processed by the NOAA/NMFS/SEFSC team.

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**NOAA NMFS SEFSC**  
**2009 NAVASSA CRUISE REPORT**

**April 23 – May 7, 2009**

**NF-09-04-NAV**



Prepared by Jean W. Wiener

## Research Team

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- NOAA/NMFS/SEFSC – United States Department of Commerce, National Oceanic and Atmospheric Administration/National Marine Fisheries Service/Southeast Fisheries Science Center
- RSMAS – Rosenstiel School of Marine and Atmospheric Sciences, University of Miami, Florida,
- FoProBiM – Fondation pour la Protection de la Biodiversité Marine, Haiti
- USFWS – United States Department of the Interior, Fish and Wildlife Service
- RSMAS-MBF – Rosenstiel School of Marine and Atmospheric Sciences, Marine Biology and Fisheries, University of Miami, Florida



### **Objective**

During this cruise FoProBiM's primary objective is to gather fisheries data from the Haitian fishers by collecting and measuring their catch and to gather tracking data on them as they fish around the island.

To gather tracking data each boat will be tagged with a GPS unit in order to follow the fishers as they travel around the island. This data will then be downloaded for analysis.

We will attempt to gather additional information from the fishers in order to try to match at least some of the data on where they were fishing (in this case with traps) with what was caught (spatial and temporal data) for an analysis of catch per unit effort (CPUE).

In order to gather fisheries data the fishers will be approached and asked to assist by providing us with all of their catch for the day for examination of species and size. We will provide them with a cooler and ice in which they will place their catch. At the end of the day this catch will be analyzed and returned to the fishers who may then begin their normal processing.

## **TRIP LOG**

### **23-April**

- 15:00 - Arrival in San Juan, Puerto Rico

### **24-April**

- 12:00 – Departure from United States Coast Guard Station in San Juan, Puerto Rico aboard the NOAA Ship Nancy Foster (R 352)

### **25-April**

- Transit through Mona Passage and along the southern coast of Hispaniola

### **26-April**

- 15:00 - Arrival at Navassa Island
- Performed a quick tour looking for Haitian fishing boats on the NF approaching from the SE, up along the Eastern side, across the North coast and down to Lulu Bay. Anchored near Lulu Bay (18°23.497N, 75°01.122W)
- No fishing boats observed

### **27-April**

- One marker buoy for a trap was observed along the West coast just west of the NF anchorage
- Several other traps observed along west coast
- No fishing boats observed

### **28-April**

- No fishing boats observed

### **29-April**

- No fishing boats observed

### **30-April**

- No fishing boats observed

### **1-May**

- No fishing boats observed

### **2-May**

- One fishing boat (Mercie St. Jaques) with three fishers (PaBon, Linwa, St. Louis Jary) arrived at 18:00 from Anse d'Hainault. They were hand-lining, and had several fish already in their boat from traps along the north coast that were lifted on their way in to Lulu Bay
- Said that they left Anse that morning (estimating a 12hr crossing)
- Simon and Co. back in Anse has not bought fish, lobster or conch from the local fishers in months because apparently his freezer is not working

### **3-May**

- Soak time for traps of the Mercie St. Jaques was ten days although three days is preferred
- Linwa said that they had "a lot" of traps out (his estimate 20-30); others are for other boats
- Said they would spend about 8 days at Navassa
- Agreed to cooperate with us for the catch/unit/effort study and were given two coolers with ice and a GPS unit at 8:15
- PaBon asked if they could gut the fish before putting them in the cooler; it would be easier for them -- given the OK to do so, but fish were to be brought back to the NF whole
- Outboard 15hp Yamaha Enduro engine
- 10:30 Haitians tried to sell fish to the sailboat Kauili (sp?) Berlin, MD – with success
- Linwa and PaBon said that the best season for Grouper is Dec/Jan/Feb
- Do not know exactly when lionfish started showing up in the area (concept of time ??)
- Took two coolers and returned with separated contents of two traps. Upon their return they were given two new coolers and returned at 14:00 with coolers filled with the contents of 21 traps (23 traps total for the day)(10 for Jary St. Louis, 8 for Linwa, and 5 for PaBon); 5 traps were raised with either nothing of significance or with decaying fish inside = no catch)
- Edner, Jean-Robert, and Prisner arrived from Anse d'Hainault at 19:00 (since they had no name on their boat they have been designated as Boat 2)

### **4-May**

- Both boats arrived at the NF at 8:00. Edner was given a GPS, Linwa was given two coolers with ice and a GPS

- All fishers said that not having Simon & Co. to sell the nicer fish, lobster, and conch to did hurt them financially. Without him more economically important fish such as the groupers are dried and salted like all other types and therefore do not acquire a premium price as when they are fresh
- No one on Edner's boat said they had ever seen a lionfish either in Haiti or at Navassa; in sharp distinction to all three on the St. Jacques who claim to have seen so many lionfish that they were becoming a nuisance back in Haiti
- According to Boat 2 the best season for grouper is April/May/June as opposed to St. Jacques crew who said Dec/Jan/Feb were the best season.
- Boat 2 does not have a motor
- Boat 2 is rowing around the island after having placed their sail and mast at Lulu Bay the night before
- Boat 2 also stated that the preferred soak time for a trap is three days
- Asked about spawning aggregations - No clue about any type of aggregations
- Jary, and Edner did finally say that they had seen lionfish back at Anse (starting 1-2 yrs ago)
- Second day of traps St. Jaques lifted 12 traps (Jary – 5, Linwa – 4, PaBon – 3)
- Ender and Prisner were at Navassa during the 2006 NMFS cruise when Leon Frémon died. Went straight to jail for 8 days and each paid a 15,000 HG fine/fee. Took them 4 days to get back to Anse
- Oranges, Mangoes, oil, rice, yams, charcoal for food
- Salt comes from Anse Rouge, via La Saline to Anse d'Hainault
- St. Jaques boat and motor is owned by someone else back in Anse. It was rented by Jary, Linwa, and PaBon for ¼ of their catch (*Travay pou ka*). They have to pay for their own fuel and oil
- Engineers on the NF helped to repair St. Jaques' rudder
- A fully assembled trap "*nas*" can cost about 500 Hgdes in Anse
- Boat 2 will also spend about 8 days
- Many "problems" with Georges (Simon & Co.) and the (his) fishing association (APAD)
- Clothes, coolers, ice, water and repairs for the fishers
- Food for the Poor has given 4 boats the *Associaton des Pecheurs d'Anse d'Hainault* (APAD) "Georges" and they are "just laying there".
- There are usually 4-6 fishers on each boat; this time only 3 on each; reason was explained as the ability to pay their share for the voyage expenses
- NF departed Navassa at 19:30
- Both boats confirmed that at least two boats from Anse were lost over the past year after the crew lifted railroad tracks from Navassa and put them on their boats in order to sell them back in Haiti (due to the high price commanded for scrap metal at the time). The boats apparently capsized before returning to Haiti with the loss of all crews (estimated at at least 6)

### **5-May**

Transit – return to Puerto Rico

### **6-May**

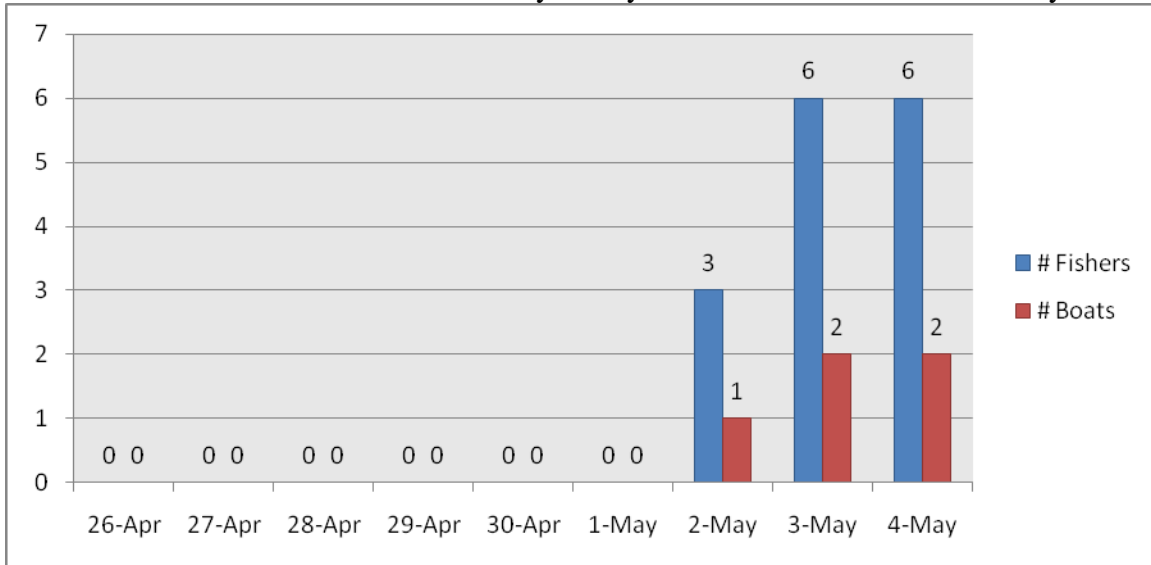
Transit – return to Puerto Rico

### **7-May**

- Arrive at US Coast Guard Station in San Juan, Puerto Rico 6:00
- Depart Puerto Rico 15:35

### **Number of Fishers and Boats at Navassa Island: April 26 – May 4, 2009**

Fishers and boats are counted for that day if they are observed around Navassa by 18:00





## Transit route

